

S/N 09/988,905

Response to Office Action Dated 08/24/2005

REMARKS

As background information, this Response is submitted in response to the Office Action mailed 08/24/2005. Claims 1—17 were originally filed. No claims have been cancelled. Claim 18 is newly added. Claims 1, 5, 7, 10, 11, 16 and 17
5 are currently amended. Accordingly, claims 1—18 are currently pending. At this time, all claims are rejected. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the rejected claims.

The §103 Rejections

The Applicant submits that the Office has failed to establish a *prima facie*
10 case of obviousness and, in view of the comments below, respectfully traverses the Office's rejections. However, before discussing the substance of the Office's rejections, a section entitled "The §103 Standard" is provided and will be used in addressing the Office's rejections. Following this section, a section entitled "The Burger Reference" is provided, which describes Burger's disclosure and teachings.

The §103 Standard
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To establish a *prima facie* case of obviousness, three basic criteria *must* be met. MPEP § 2142. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
20 *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180
25 USPQ 580 (CCPA 1974).

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Hence, when patentability turns on the question of obviousness, the search for, and analysis of, the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine or modify the references relied on as evidence of obviousness. The need for specificity pervades this authority. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed").

The Burger Reference

10 The Burger reference discloses a digital reproduction machine, e.g. a copy machine, which reproduces scanned images or image information from an external source (e.g. a computer, see column 4, lines 43—46). Burger discloses that digital image information is subjected to half-toning, so that a document may be printed in a raster pattern of image dots that are white or black (see column 4, lines 45—
15 48). In particular, Burger teaches that half-toning is applied at step 8 of the flowchart of FIG. 3, wherein image information is converted to binary form and stored as bit data as a result of a conversion process involving reference to a threshold value that converts gray scale to half-tone (see column 5, lines 29—34).

Claim Amendments and Rejections

20 Claims 1, 7, 11 and 17 stand rejected under 35 U.S.C. §102 (b) as being obvious over U.S. Pat. No. 5,140,340 hereinafter "Stephenson." However, all independent claims, i.e. claims 1, 7, 11, 16 and 17, have been amended to recite subject matter substantially contained in claims 5 and/or 10, prior to their amendment. Because the independent claims currently subject to a §102 rejection

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have been amended to include subject matter from dependent claims currently rejected under §103, the Applicant treats the rejection of claims 1, 7, 11, 16 and 17 as a §103 rejection as being obvious over Stephenson in view of U.S. Pat. No. 5,856,877 hereinafter "Burger."

5 **Traversal of the §103 Rejections**

Claim 1 recites, as amended, a method comprising:

- measuring a print media skew of print media;
- 10 • mapping unskewed print information to compensate for the print media skew, thereby creating skew-corrected print information, **wherein the mapping comprises turning off half-toning to simplify the mapping;**
 and
- using the skew-corrected print information to apply a print image to the print media.

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 The Applicant observes that the Burger reference does not disclose turning off half-toning. Burger discusses half-toning by name in three locations. (Additionally, Burger refers to half-toning at column 5, lines 28—35, but not by name.) In a first reference to half-toning, at column 1, lines 15—16, particularly
20 line 25) Burger discusses half-toning in the context of photocopy machines. In particular, opto-electrical scanning can be used to generate digital image dot data (C1, L18). The data so obtained can be processed—in particular, the gray value data can be converted to half-toned data (C1, L24—25) for use in devices wherein a black or white decision (i.e. no "gray" decision) must be made (C1, L24—26).
25 Therefore, in this reference to half-toning, Burger makes no suggestion of turning off half-toning for any reason. Additionally, Burger makes no reference to simplifying mapping by turning off half-toning.

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In a second reference to half-toning, Burger discusses half-toning of digital grey value image information obtained by scanning a document (see column 4, lines 42—53). The digital information obtained from the scan (or from an external source, e.g. a computer) can be “subjected to halftoning, so that it is put into the form of a raster pattern of image dots which are white or black.” Therefore, in this reference to half-toning, Burger makes no suggestion of turning off half-toning for any reason. Additionally, Burger makes no reference to simplifying mapping by turning off half-toning.

In a third and final reference to half-toning, at column 11, lines 3—13, Burger teaches that half-toning can be used to control the contrast operation (in what appears to be a well-known manner, using UP and DOWN keys). Therefore, in this reference to half-toning, Burger makes no suggestion of turning off half-toning for any reason. Additionally, Burger makes no reference to simplifying mapping by turning off half-toning.

It is significant that Burger refers to half-toning at column 5, lines 29—35. Burger discloses that gray scale data are converted into binary, by translating gray dots to black or white depending on how the gray matches a threshold. Burger does not indicate that this can be turned off.

Accordingly, Burger does not disclose turning off half-toning generally, and more specifically does not disclose turning off half-toning to simplify mapping. In fact, Burger discloses that “information is subjected to half-toning, so that it ... can then be printed in the processing stage 107” (col. 4, lines 46—49).

Rebuttal of the Patent Office’s rejection of Claim 5, as would now presumably be applied to Claim 1, due to amendment of Claim 1.

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The Patent Office suggests that Burger teaches such a use of half-toning. In particular, the Patent Office points to column 4, lines 45—51.

Referring to column 4, lines 45—51, Burger refers to half-toning as a tool to form a raster pattern of image dots that are white or black. Burger does not
5 refer to turning half-toning off for any reason.

The Patent Office also refers to column 5, lines 30—32.

Referring to column 5, lines 30—32, the recited passage discloses converting information to binary form and storing the information in a memory bit map file. The conversion is done by reference to a threshold value, obtained via
10 another step. What this passage describes is actually half-toning. Burger is turning a gray scale image into a black and white dot image by using a threshold value. That is, dots grayer than the threshold are black, and dots lighter than the threshold are white. Thus, Burger does half-tone, and doesn't teach turning half-toning off.

15 The Patent Office also refers to column 7, lines 1—24 and steps 20—22 of FIG. 3.

Referring to column 7, lines 1—24 and steps 20—22 of FIG. 3, the recited passage, Burger discusses a skew angle of a document page moving through the system. Burger discloses a means to measure the angle of skew, using the left-side
20 margin of the text. Using the angle of skew, Burger teaches that object boxes can be rotated in an opposite direction by that angle, to reorient them. Burger then discusses object boxes, with respect to text blocks, lines and words in producing a layout structure of the text. Again, Burger fails to disclose turning half-toning off for any reason.

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The Patent Office also concludes, "wherein skew correction is applied to image data and is separate from the steps of half-toning. Thus, the half-toning function is disabled while the skew processing is undergone." The Applicant respectfully disagrees.

5 Generally, Burger teaches half-toning all data obtained by scanning and/or remote files. The Applicant respectfully refers the Office to column 4, lines 42—53, where digital gray value information (line 42) is obtained by the scanner 101 or the external source. Significantly, the digital gray information is subjected to half-toning, to put it into black and white raster (45—50). Nothing in Burger
10 would make one think that this is optional.

Specifically, Burger half-tones data at column 5, lines 27—35, where gray dots are reference to a threshold, and turned into black or white dots. Burger does not teach turning off the half-tone for any reason.

 Thus, the Patent Office argues extensively that half-toning is non-
15 operational in FIG. 3. However, we see half-toning in operation at column 5, lines 29—35. Moreover, Burger explicitly states that data is half-toned at column 3, lines 42—53, without any indication that half-toning could be turned off. Throughout the disclosure, Burger does not disclose turning off the half-toning. Accordingly, Burger fails to disclose this element recited by Claim 1, as amended.

20 **Claims 2—6** depend from Claim 1 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in Claim 1, are neither disclosed nor suggested in references of record, either singly or in combination with one
25 another.

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Claim 7 recites, as amended, a method comprising:

- taking a measurement of print media skew;
- creating skew-corrected print information using the measurement of print media skew, **wherein the skew-corrected print information is created with half-toning turned off;** and
- applying a print image to print media using the skew-corrected print information.

The Applicant observes that the Burger reference does not disclose the skew-corrected print information is created with half-toning turned off. In fact, Burger make a general reference to half-toning data at column 4, lines 42—53, and a specific reference to half-toning at column 5, lines 28—34. Neither indicates that half-toning is turned off.

Claim 7 includes material from Claims 5 and/or 10, and is therefore rejected under a theory similar to that of Claim 1. Accordingly, the Applicant incorporates the traversal of the rejection of Claim 1 herein by reference. Therefore, the Applicant respectfully requests that the rejection be removed, and that Claim 7 be allowed to issue.

Claims 8—10 depend from Claim 7 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in Claim 7, are neither disclosed nor suggested in references of record, either singly or in combination with one another.

Claim 11 recites, as amended, a system comprising:

- a sensor to sense skew of print media within a printer; and
- a print output alignment module to map un-skewed print information to compensate for print media skew detected by the sensor, thereby creating skew-corrected print information, **wherein the mapping comprises**

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turning off half-toning to simplify the mapping, wherein the print output alignment module aligns print output according to the skew of the print media.

5 The Applicant observes that the Burger reference does not disclose the skew-corrected print information is created with half-toning turned off. In fact, Burger make a general reference to half-toning data at column 4, lines 42—53, and a specific reference to half-toning at column 5, lines 28—34. Neither indicates that half-toning is turned off.

10 Claim 11 includes material from Claims 1, 5 and/or 10, and is therefore rejected under a theory similar to that of Claim 1. Accordingly, the Applicant incorporates the traversal of the rejection of Claim 1 herein by reference. Therefore, the Applicant respectfully requests that the rejection be removed, and that Claim 11 be allowed to issue.

15 Claims 12—15 depend from Claim 11 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in Claim 11, are neither disclosed nor suggested in references of record, either singly or in combination with one another.

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Claim 16 recites, as amended, a system to detect and compensate for print media skew within a printer, comprising:

- a skew evaluation module to interpret measurements made by a sensor and determine print media skew;
- 25 • a media rejection module to reject print media if the print media skew exceeds a threshold value;
- a first print data buffer to store unskewed print data;

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- a print data mapping module to map the unskewed print data to skew-corrected print data, **wherein the print data mapping module turns off half-toning to simplify mapping;** and
- a second buffer to store the skew-corrected print data.

5

The Applicant observes that the Burger reference does not disclose the skew-corrected print information is created with half-toning turned off. In fact, Burger make a general reference to half-toning data at column 4, lines 42—53, and a specific reference to half-toning at column 5, lines 28—34. Neither
10 indicates that half-toning is turned off.

Claim 16 includes material from Claims 5 and/or 10, and is therefore rejected under a theory similar to that of Claim 1. Accordingly, the Applicant incorporates the traversal of the rejection of Claim 1 herein by reference. Therefore, the Applicant respectfully requests that the rejection be removed, and
15 that Claim 16 be allowed to issue.

Claim 17 recites a computer-readable medium having processor-executable instructions thereon which, when executed by a processor, cause the processor to:

- measure skew of print media;
- 20 • **turn off half-toning to simplify skew-correction;**
- create skew-corrected print information according to the skew; and
- apply a print image to the print media according to the skew-corrected print information.

25 The Applicant observes that the Burger reference does not disclose the skew-corrected print information is created with half-toning turned off. In fact, Burger make a general reference to half-toning data at column 4, lines 42—53,

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and a specific reference to half-toning at column 5, lines 28—34. Neither indicates that half-toning is turned off.

Claim 17 includes material from Claims 5 and/or 10, and is therefore rejected under a theory similar to that of Claim 1. Accordingly, the Applicant
5 incorporates the traversal of the rejection of Claim 1 herein by reference. Therefore, the Applicant respectfully requests that the rejection be removed, and that Claim 17 be allowed to issue.

Claim 18 depend from Claim 17 and is allowable as depending from an allowable base claim. These claims are also allowable for their own recited
10 features that, in combination with those recited in Claim 18, are neither disclosed nor suggested in references of record, either singly or in combination with one another.

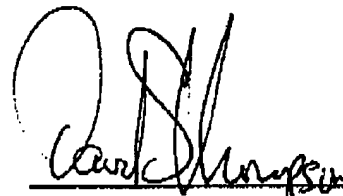
Conclusion

15 The Applicant submits that all of the claims are in condition for allowance and respectfully requests issuance of a Notice of Allowability. If the Office's next anticipated action is not the issuance of a Notice of Allowability, the Applicant respectfully requests scheduling of an interview with the undersigned attorney.

20 Respectfully Submitted,

Dated: 12-27-'05

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